

DETAILED ACTION

1. This action is in response to the amendment filed on March 03, 2009. Claims 5-6, 9-15, 17-19, 24-25, 28-34 and 36-39 are pending and have been considered below.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Steven A. Shaw on April 7, 2009.

The claims in the application are amended as follows:

In Claims:

(1) In claim 5; replace lines 11-13 with – **communications channels as filtered by one of a plurality of branch-specific equalizers, wherein the plurality of branch-specific equalizers collectively comprise an optimum space-time linear equalizer; -**.

(2) In claim 24; replace lines 11-12 with – **filtered by one of a plurality of branch-specific equalizers, wherein the plurality of branch-specific equalizers collectively comprise an optimum space-time linear -**.

(3) In claim 24, line 29; insert a semicolon - ; - at the end of line.

Allowable Subject Matter

3. Claims 5-6, 9-15, 17-19, 24-25, 28-34 and 36-39 are allowed.
4. The following is an examiner's statement of reasons for allowance: The prior art of record discloses a system for training branch specific prefilters in a communication receiver where an channel response is determined without reference to the prefilter, but prior art fails to disclose that determining frequency responses of the communications channels from the transmitters to the input branches include combination of, a first computational module for computing a frequency-dependent SNIR from the frequency responses of the communications channels and inverse FFT for inverse transforming a function of the frequency-dependent SNR to obtain an autocorrelation function and a second computational module for computing an impulse response of the conditioned channel from the autocorrelation function with second FFT for transforming the impulse response of the conditioned channel to obtain the frequency response of the conditioned channel.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
- a. Lin et al. (US 7,327,819) discloses a system and method for phase detection and carrier recovery for offset in dual mode QAM/VSF systems.
 - b. Arslan et al. (US 7,321,646) discloses a system and method for pre-filtering a signal to increase signal to noise ratio in communication channels.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HIRDEPAL SINGH whose telephone number is (571) 270-1688. The examiner can normally be reached on Mon-Fri (Alternate Friday Off) 8:30AM-6:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. S./
Examiner, Art Unit 2611
/Shuwang Liu/
Supervisory Patent Examiner, Art Unit 2611